

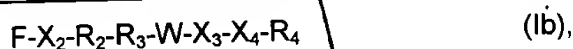
Kindly amend the following claims:

a¹ 1. (Amended) A compound or a derivativ thereof, capable of binding to MDM2[, particularly human DM2 and specifically inhibiting or blocking] wherein the compound inhibits the binding of MDM2 to [the] p53 protein[, particularly human p53], in vitro or in vivo.

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B 5. (Amended) A peptide according to claim 3 selected from the group consisting of [the] peptides with the sequences M-P-R-F-M-D-Y-W-E-G-L-N, Q-P-T-F-S-D-Y-W-K-L-L-P, and P-X-F-X-D-Y-W-X-X-L, or a derivative thereof. ^{SEQ ID No. 6} ^{SEQ ID No. 7} ^{SEQ ID No. 3}

6. (Amended) A [derivative of a] peptide according to claim 3 wherein the peptide [which] is a fragment comprising at least eight consecutive amino acids of the sequence of formula (I), or a derivative thereof.

7. (Amended) A peptide fragment according to claim 6, [which is an 8mer peptide of] comprising eight amino acids according to formula



wherein R_2 is arginine (R), histidine (H), glutamic acid, cysteine, serine, or preferably aspartic acid (D),

R_3 is histidine (H), phenylalanine (F) or tyrosine (Y), and

R_4 is phenylalanine (F), glutamine (Q) or leucine (L) [independently from one another, each have the meanings and preferences given for formula (I)],

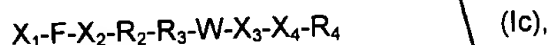
X_2 is methionine, isoleucine, threonine, arginine, alanine or serine, preferably methionine;

X_3 is glutamic acid, threonine, alanine, phenylalanine or serine, preferably glutamic acid;

X_4 is glycine, glutamine, threonine, alanine or aspartic acid, preferably glycine,

or a derivative of such fragment.

8. (Amended) A fragment according to claim 6 having the formula



wherein

R_1 , is a proline (P), leucine (L), glutamic acid (E), cysteine (C) or glutamine (Q),

R_2 is arginine (R), histidine (H), glutamic acid, cysteine, serine, or preferably aspartic acid (D),

R_3 is histidine (H), phenylalanine (F) or tyrosine (Y), and

R_4 is phenylalanine (F), glutamine (Q) or leucine (L), [independently from one another, each have the meanings and preferences given for formula (I)],

X₁ is arginine, asparagine, alanine, threonine or valine; particularly arginine
 X₂ is methionine, isoleucine, threonine, arginine, alanine or serine; preferably methionine;
 X₃ is glutamic acid, threonine, alanine, phenylalanine or serine; preferably glutamic acid;
 X₄ is glycine, glutamine, threonine, alanine or aspartic acid, preferably glycine,
 or a derivative of such fragment.

9. (Amended) A peptide fragment according to claim 6 selected from the group [of fragments] consisting of:

P-A-F-T-H-Y-W-P, P-T-F-S-D-Y-W-P and P-R-F-M-D-Y-W-P, or a derivative thereof.

10. (Amended) A method for using [Use of] a compound [according to any of claims 1 to 9 for identification of a molecule binding to MDM2] comprising the steps of:
obtaining a peptide or a derivative thereof capable of binding to MDM2, wherein the peptide

comprises an amino acid motif of the formula

R₁-X-F-X-R₂-R₃-W-X-X-R₄ (I),

wherein

R₁ and is a proline (P), leucine (L), glutamic acid (E), cysteine (C) or glutamine (Q),

X stands for [one (any)] a natural amino acid,

R₂ is arginine (R), histidine (H), glutamic acid, cysteine, serine, or preferably aspartic acid (D),

R₃ is histidine (H), phenylalanine (F) or tyrosine (Y),

R₄ is phenylalanine (F), glutamine (Q) or leucine (L); and

F is phenylalanine and W is tryptophan; and

inhibiting the binding of MDM2 to p53-protein.

11. (Amended) A method for using [Use of] a compound [according to any of claims 1 to 9 for the purification of a binding partner, particularly MDM2] comprising the steps of:

obtaining a peptide or a derivative thereof capable of binding to MDM2, wherein the peptide
comprises an amino acid motif of the formula

R₁-X-F-X-R₂-R₃-W-X-X-R₄ (I),

wherein

R₁ and is a proline (P), leucine (L), glutamic acid (E), cysteine (C) or glutamine (Q),

X stands for [one (any)] a natural amino acid,

R₂ is arginine (R), histidine (H), glutamic acid, cysteine, serine, or preferably aspartic acid (D),

R₃ is histidine (H), phenylalanine (F) or tyrosine (Y),

R₄ is phenylalanine (F), glutamine (Q) or leucine (L); and

Q2 cont F is phenylalanine and W is tryptophan; and
using the peptide to purify a binding partner, particularly MDM2.

13. (Amended) Use of a compound according to [any of] claims[s] 1 [to 9] for diagnosis of a disease.

14. (Amended) A pharmaceutical composition that is suitable for administration to a warm-blooded animal, including humans, or for administration to cells or cell lines derivable from a warm-blooded animal, including a human, for the treatment or prevention of a disease that responds to inhibition of the interaction of p53 with MDM2, said composition comprising an amount of a peptide wherein the peptide comprises an amino acid motif of the formula

R₁-X-F-X-R₂-R₃-W-X-X-R₄ (I).

wherein

R₁ and is a proline (P), leucine (L), glutamic acid (E), cysteine (C) or glutamine (Q).

X stands for [one (any)] a natural amino acid.

R₂ is arginine (R), histidine (H), glutamic acid, cysteine, serine, or preferably aspartic acid (D).

R₃ is histidine (H), phenylalanine (F) or tyrosine (Y).

R₄ is phenylalanine (F), glutamine (Q) or leucine (L); and

F is phenylalanine and W is tryptophan [compound according to any of claims 1 to 9], which is effective for said inhibition, together with at least one pharmaceutically acceptable carrier.

15. (Amended) A method for using [The use of] a [compound according to any of claims 1 to 9] peptide, wherein the peptide comprises an amino acid motif of the formula

R₁-X-F-X-R₂-R₃-W-X-X-R₄ (I).

wherein

R₁ and is a proline (P), leucine (L), glutamic acid (E), cysteine (C) or glutamine (Q).

X stands for [one (any)] a natural amino acid.

R₂ is arginine (R), histidine (H), glutamic acid, cysteine, serine, or preferably aspartic acid (D).

R₃ is histidine (H), phenylalanine (F) or tyrosine (Y).

R₄ is phenylalanine (F), glutamine (Q) or leucine (L); and

F is phenylalanine and W is tryptophan [for] in the preparation of a pharmaceutical composition for the treatment or prevention of a disease that responds to inhibition of the interaction of p53 with MDM2.

16. (Amended) A process for the preparation of a peptide capable of binding to MDM2 and inhibiting the binding of MDM2 to p53 protein [or a derivative thereof according to any of claims 2 to 9] comprising the step of: reacting a fragment of [such] said peptide, wherein the peptide [which] has a free carboxy group, or a reactive derivative thereof, with a complementary fragment that has an amino group with at least one free hydrogen atom, or with a reactive derivative thereof, resulting in the formation of a peptide bond, and, if desired, removing a present protecting group, or derivatising said peptide [or derivative].

17. (Amended) A method of treating or preventing a disease comprising the steps of:
obtaining a peptide or a derivative thereof capable of binding to MDM2, wherein the peptide comprises an amino acid motif of the formula

R₁-X-F-X-R₂-R₃-W-X-X-R₄ (I),

wherein

R₁ and is a proline (P), leucine (L), glutamic acid (E), cysteine (C) or glutamine (Q),

X stands for [one (any)] a natural amino acid,

R₂ is arginine (R), histidine (H), glutamic acid, cysteine, serine, or preferably aspartic acid (D),

R₃ is histidine (H), phenylalanine (F) or tyrosine (Y),

R₄ is phenylalanine (F), glutamine (Q) or leucine (L); and

F is phenylalanine and W is tryptophan; and

administering a therapeutically useful amount of the peptide [a compound according to any of claims 1 to 9] to a patient.

18. (Amended) A method for inducing growth arrest or apoptosis in tumor cells [which contain] wherein the cells contain wild type p53 and non-elevated MDM2 levels, the method comprising the step of inhibiting the interaction between MDM2 and p53 in vivo[s] or in vitro.

22. (Amended) The method of claim 21 wherein the DNA molecule expresses a peptide or a derivative thereof according to [any of] claim[s] 2 [to 9].

23. (Amended) A method of treating or preventing a hyperproliferative disease comprising tumor cells having wild type p53 and a non-elevated MDM2 level, the method comprising the step of interfering with the interaction of human p53 and human MDM2.